

Write your questions
and thoughts here!

Rationalize Fractions with Radicals

1. $\lim_{x \rightarrow 5} \frac{\sqrt{x+4}-3}{x-5}$

2. $\lim_{x \rightarrow 10} \frac{x-10}{3-\sqrt{x-1}}$

Complex Fractions

3. $\lim_{x \rightarrow 0} \frac{x}{\frac{1}{x-4} + \frac{1}{4}}$

4. $\lim_{x \rightarrow 0} \frac{\frac{1}{(x+3)^2} - \frac{1}{9}}{x}$

1.7 Selecting Procedures for Determining Limits

Calculus

Practice

Evaluate each limit.

1. $\lim_{x \rightarrow 0} \frac{\sqrt{x+7}-\sqrt{7}}{x}$

2. $\lim_{x \rightarrow 1} \sqrt{x+4}$

3. $\lim_{x \rightarrow 0} \frac{\frac{1}{x+3} - \frac{1}{3}}{x}$

4. $\lim_{x \rightarrow -3} \frac{x-2}{x^2-3x+2}$

5. $\lim_{x \rightarrow 7} \frac{\sqrt{x+9}-4}{x-7}$

6. $\lim_{x \rightarrow 0} \frac{2x^5+3x^4}{x^4}$

7. $\lim_{x \rightarrow 6} \frac{x}{\frac{1}{x+6} - \frac{1}{6}}$

8. $\lim_{x \rightarrow 5} \frac{x^2-5x}{x-5}$

9. $\lim_{x \rightarrow 0} \frac{\sqrt{x+9}-3}{x}$

10. $\lim_{x \rightarrow 1} \frac{\frac{1}{3} - \frac{1}{3x}}{x-1}$

11. $\lim_{x \rightarrow 0} \frac{\sqrt{x+11}-\sqrt{11}}{x}$

12. $\lim_{x \rightarrow 3} \frac{\sqrt{2x-6}}{x}$

13. $\lim_{x \rightarrow 0} \frac{\frac{1}{(x+2)^2} - \frac{1}{4}}{x}$

1.7 Selecting Procedures for Determining Limits

Test Prep

14. $\lim_{x \rightarrow b} \frac{b-x}{\sqrt{x}-\sqrt{b}}$ is

(A) $-2\sqrt{b}$

(B) $-\sqrt{b}$

(C) $2b$

(D) \sqrt{b}

(E) $2\sqrt{b}$